Tailoring a plan: International opinion on nutraceutical and multimodal management of joint health in dogs and cats

A Roundtable Discussion
Held September 25, 2013, in Vienna, Austria
Osteoarthritis afflicts many dogs and more cats than most in the veterinary profession have previously recognized, and today many treatment modalities are available to veterinarians. As nutraceutical research emerges and veterinarians gain experience with these products, it is evident that a complementary role exists for nutraceuticals in clinically managing joint health in companion animals.

In September 2013, an international group of clinicians, including orthopedic specialists, gathered in Vienna, Austria, to discuss their therapeutic strategies and the efficacy and usefulness of a multimodal approach in canine and feline patients with joint disease.

Osteoarthritis in dogs and cats
Dr. Brian Beale: Let’s first discuss how you recognize joint health problems in your patients. Does the presentation differ between cats and dogs?

Dr. Thibaut Cachon: Most of the time dog owners come in because their dog is lame. Cat owners come because their cat is not acting normal; it is less active, less willing to jump. Cat owners do not clearly recognize an orthopedic problem in their cats. And, for cats, a full physical examination — including an orthopedic and a neurologic examination — is difficult to perform and to interpret. It is important to be calm and a bit more patient with cats in order to do a good physical examination.

Dr. David Bennett: Osteoarthritis is common in cats, particularly in older cats. Cats over 6 or 7 years of age may start developing osteoarthritis and it will progress. It’s different than in dogs. In cats, osteoarthritis tends to be generalized — nearly every joint in the cat can be affected or will become affected with time. Yet, it seldom produces lameness in cats.

Changes in behavior or lifestyle at home alert us to the fact that the cat might have osteoarthritis. These cats stop jumping. They don’t play with the owners like they used to or with other cats in the household. They don’t hunt or groom themselves like they used to. They have problems using their litter tray. While all these clues could indicate other problems, they are highly suggestive of osteoarthritis, which should be at the top of the differential diagnosis list.

Owners often interpret these changes as part of the normal aging process. You’ve got to ask the owner specific questions relating to the cat’s behavior. Owner assessment forms are being developed by a number of groups. The form we use is divided into four behavioral domains — mobility, activity, temperament, and grooming habits.¹

The behavioral changes in cats with osteoarthritis are also seen in dogs. That is important because in some small dog breeds lameness can be less evident. Cats with osteoarthritis pose other diagnostic challenges. With cats, arthritic joints often are not thickened to the same degree as in dogs, and cats don’t have the large synovial effusions. Crepitus is also rare in cats.

Dr. Sune Jerre: For dogs, you need an area where you can conduct lameness examinations the same way every time. I always do my lameness examinations outdoors. Sometimes I let the dogs do some of their normal work — catch a ball or other activities.

Osteoarthritis is common in cats, particularly in older cats. In cats, it tends to be generalized — nearly every joint can be affected or will become affected with time.

— Dr. David Bennett

Dr. Martin Unger: Always try to evaluate the patient for proprioceptive deficits, and look at the animal’s muscle mass. Then palpate the joints. The workup is much more difficult in cats. Most of the time it does not work to palpate a cat symmetrically on both sides at the same time, and they move totally differently when they are in your hospital, so you cannot evaluate them easily. More owners now show me short videos on their phones to demonstrate their cats’ behavior.

Role of radiography
Dr. Beale: A recent cross-sectional study in cats revealed that the prevalence of radiographic osteoarthritis was amazingly high.² In asymptomatic cats in the 0- to 5-year age group, 80% of cats had radiographic osteoarthritis. And at about 5 to 10 years of age, it climbed to 84%. By the time cats reached 10 years of age, the percentage with osteoarthritis was
A look at the research — Glucosamine and chondroitin sulfate

Numerous published controlled studies have shown that glucosamine and chondroitin sulfate can inhibit specific inflammatory mediators associated with osteoarthritis and protect against cartilage damage. In an instability model of osteoarthritis in rabbits fed diets supplemented with FCHG49® glucosamine, TRH122® chondroitin sulfate, and manganese ascorbate, the combination of the three agents (as found in Cosequin® joint health supplement), compared with controls (no supplement), was best at protecting against the progression of cartilage damage. No severe and fewer moderate lesions were noted in the cartilage of the combination group (see photomicrographs below). In vitro, the combination of glucosamine and chondroitin sulfate synergistically increased glycosaminoglycan production. The study showed the benefit of using Cosequin over glucosamine or chondroitin sulfate alone.

Results of a double-blind, placebo-controlled study in dogs showed that pretreatment with Cosequin had a protective effect against chemically induced synovitis as well as associated bone remodeling, as assessed by scintigraphy. Pretreatment also reduced lameness.

![Photomicrographs of histologic sections of the medial femoral condyle (from joints with surgically induced instability) from a rabbit in the combination group (A) and the control group (B). The safranin O dye has stained the glycosaminoglycan in the cartilage matrix. Note the loss of the cartilage layer in the control group (B). (Reprinted with permission from Lippiello L, Woodward J, Karpman R, et al. In vivo chondroprotection and metabolic synergy of glucosamine and chondroitin sulfate. Clin Orthop Relat Res 2000;381:229-240.)](image)

References

essentially 100%. Are you seeing evidence of arthritis in younger cats?

Dr. Bennett: Radiographically, yes. But it’s rare to see behavior changes in such young cats. Basically any joint can be affected in these cats, but the carpus, tarsus, and phalanges are seldom affected. The most commonly affected joints are the hip, elbow, and stifle. One of my PhD students is studying the radiographic features of osteoarthritis in cats, and whether there’s correlation with cartilage damage. We’ve scored the radiographic features and the gross pathology of the cartilage in more than 50 cadaveric cats. Interestingly, there is a good correlation between the radiographic features and the cartilage changes. That’s important because it is the loss of cartilage that has the most serious effect in osteoarthritis. Once cartilage is lost, it’s difficult to get back again, and once down to the bone, you’re at an end stage. If the bone is exposed, it is going to become exceedingly painful for the animal.

Dr. Unger: Is there a weight correlation? We’re seeing a lot of overweight cats with radiographic changes in the joints.

Dr. Bennett: This population of cats had been euthanized for reasons other than musculoskeletal disease. They didn’t have any apparent clinical features of arthritis. But most of the cats were old. Most of them were not overweight. That doesn’t mean to say that obesity didn’t play a part at some time in their lives. But most of the cats in this cadaveric study that had advanced arthritis were not overweight. If anything, they were underweight, undernourished.

In the clinical setting, you sometimes encounter cats with joints that look normal on radiographs, but are painful and show other changes consistent with arthritis. And, there are cats with severe arthritic changes on radiographs that do not have a painful joint on manipulation. Assessing pain during the physical examination is, as we already mentioned, difficult in cats. Cats get fidgety and you don’t know whether they’re exhibiting signs of pain or not.

Dr. Bruno Peirone: Even in dogs there may not be a simple correlation between the amount of osteoarthritis and the clinical lameness. I’ve seen many dogs with hip dysplasia and severely affected hips on radiographs, but the dogs are running well. On the other hand, we may see a smaller problem on radiographs but the dog is readily exhibiting signs of pain.

Dr. Jerre: I see a lot of cases with no radiographic signs but arthroscopy of the elbows reveals problems, especially in young dogs. I also see a lot of dogs that
have been examined at 1 year of age and come back with bad arthritis when they are 5 years old.

Dr. Cachon: Radiography is a specific test but not a sensitive test for evaluating joints.

Advances in joint therapy — A multimodal approach
Dr. Beale: In the past couple of decades, we have learned new things about managing patients with osteoarthritis or joint problems. What changes have you seen in the past 15 years in the management of these small-animal patients?

Dr. Jerre: Fifteen to 20 years ago, studies looking at long-term use of nonsteroidal anti-inflammatory drugs (NSAIDs) came out. A lot of dogs were then administered NSAIDs for years. Nutraceuticals came a little later. Specially designed foods also entered the market. These three things have changed the management of dogs with osteoarthritis.

Dr. Unger: Owners are much more aware of elbow and knee problems, and arthroscopy and computed tomography have changed our look at this disease. For knees, tibial-plateau-leveling osteotomy (TPLO) and tibial tuberosity advancement (TTA) procedures have changed our approach. I remember at the beginning, we were treating complete cruciate rupture. Now most cases we see are partial ruptures. We treat them early; it’s a different approach to diagnosis and treatment. We’ve also added physiotherapy to the treatment options. Offering an overall management plan utilizing different modalities for our patients is a big change.

Dr. Bennett: I think the biggest change in the past 10 to 15 years has been the gradual recognition by the veterinary profession that cats do, in fact, develop arthritis. It’s common in cats, and they’re suffering. We still have a lot of owner education to do before the public recognizes that, as cats age, they develop osteoarthritis. Any cat over 5 years of age should have regular checks by a veterinarian to detect arthritis at a much earlier stage.

Also, many more NSAIDs and new nutraceuticals have come onto the market. Companies such as Nutramax have done excellent research on these compounds and have shown that they have a role to play. And we understand much more about them now than we did 10 to 15 years ago. Essential fatty acids, either as supplements or as a special diet, have made a difference. We now understand how omega-3 fatty acids can help reduce inflammation.

And then there are the numerous surgical advances. Now we have joint replacements. I think the hip replacement has revolutionized how we treat end-stage arthritis in large-breed dogs. Physiotherapy and biological therapies are also available, and great potential exists for the use of stem cells in patients with osteoarthritis.

Dr. Beale: Physical therapeutic modalities are also available — laser, shockwave, ultrasonic therapy, and, of course, weight loss. Weight loss and improvement of body condition score are now emphasized.

Nutraceutical use in arthritic patients
Dr. Beale: My stepdaughter has a golden retriever. This is a great dog, but by the time she was 2 years old, we had diagnosed bilateral hip dysplasia and she’d already torn both cruciate ligaments. She also had osteochondritis dissecans (OCD) of one stifle and one tarsus. She was very sensitive to NSAIDs, so we chose nutraceuticals (starting with Cosequin® and switching to Dasuquin®), and we’ve been managing the dog for about six years now. It’s one case where it made a difference.

Dr. Michael Kowaleski: All my patients with osteoarthritis receive nutraceuticals, regardless of their species, age, or activity level. I use a combination of glucosamine, chondroitin sulfate, and avocado soybean unsaponifiables (ASU). I see cases by referral, so I typically start nutraceuticals at the first visit or immediately after surgery. We use nutraceuticals long-term. We move from a loading to a maintenance administration level, following the label guidelines.

Dr. Bennett: You cannot expect an improvement with patients receiving glucosamine until four to six weeks of therapy. Administering it only for a week or two is insufficient. With an NSAID you will often see an effect in a few days. You’ve got to give nutraceuticals for a much longer period before you’ll start seeing an improvement.

Dr. Beale: Is a nutraceutical worth using in severe cases?

Dr. Peirone: I would expect good results in mild to moderate cases, but would not rely on a nutraceutical...
for severe osteoarthritis. Severely affected joints need more treatment.

**Dr. Beale:** A study in people with symptomatic knee osteoarthritis compared the Western Ontario and McMaster Universities Osteoarthritis (WOMAC) scores for those receiving an NSAID with those receiving a nutraceutical. When analyzing the group as a whole, the NSAID group scored better than the nutraceutical group. But, surprisingly, individual group analysis based on baseline WOMAC pain scores (either mild or moderate to severe pain) revealed that the nutraceutical group scored better in the moderate to severe pain group.³⁴

**Dr. Bennett:** In cats, nutraceuticals help severe cases. The cadaveric study in cats shows horrendous joint pathology. It is worse than what I see in dogs. The cartilage is frequently completely gone. Interestingly, cats don’t get as much inflammation in the synovium as dogs or people do. Some of the old cats that I treat get better just with a nutraceutical.⁵

**Dr. Beale:** Do you see a role for nutraceuticals in patients with immune-mediated polyarthritis?

**Dr. Bennett:** That’s a very different disease. We wouldn’t normally use anything other than immunosuppressive treatment to get the disease under control or into remission in these patients. But an argument exists for nutraceutical use in some cases because the inflammation can persist for weeks. Sometimes you cannot completely control it and persistent chronic low-grade inflammation results. Giving these animals a nutraceutical may be reasonable because the inflammatory process damages the cartilage. I might discuss it with the owner, particularly if it is a case that isn’t in remission and the patient is receiving continuous low-dose steroids. That might be a good idea to give a nutraceutical at the same time.

**Dr. Beale:** How do you decide which nutraceutical to use?

**Dr. Jerre:** I just want to use one — Dasuquin — because there is good research behind it.

**Dr. Kowaleski:** Key considerations when choosing a nutraceutical are the types and quality of the active ingredients (especially chondroitin sulfate, glucosamine, and ASU), the supporting studies, and the safety. I like to know what the research (both in vivo and in vitro) has shown for the active ingredients. Has a chondroprotective effect been demonstrated for any of the ingredients? This information can be gleaned from the literature.

Of course not all supplements meet their label claims, so I advise clients to use a brand from a manufacturer that has been shown to contain what the label claims.

**Dr. Unger:** When we sell something as a veterinarian we have to have confidence that the producer will maintain a certain standard. We should always hold the products we sell to a high standard.

**Dr. Peirone:** Research demonstrating that a product is safe is important as well.

**Dr. Bennett:** I recommend products available in the United Kingdom from reputable manufacturers. Using a low-molecular-weight chondroitin sulfate is important because it is better absorbed. I think these products might be having a positive effect, but we still don’t know exactly how they work. I know that glucosamine/chondroitin and avocado soybean extract have an antioxidant effect. Levels of antioxidants need to be increased in an inflamed joint.

**Dr. Kowaleski:** I recommend a combination of glucosamine, chondroitin, and ASU in all cases of osteoarthritis.

**Dr. Beale:** Do you think that you can transfer the findings from one study of a particular product to other products that also contain chondroitin sulfate and glucosamine?

**Dr. Bennett:** The coattail effect. Some manufacturers put a lot of money into research and another manufacturer comes along and says, “Yes, our product’s exactly the same.” You’ve got to be
A look at more research — Glucosamine, chondroitin sulfate, and ASU

In vitro research has shown that the combination of NMX1000® avocado soybean unsaponifiables (ASU), FCHG49 glucosamine, and TRH122 chondroitin sulfate, found in Dasuquin® joint health supplement, inhibits expression or production of many mediators linked to osteoarthritis (e.g., cyclooxygenase-2 [COX-2], prostaglandin E₂ [PGE₂], interleukin-1 beta [IL-1β], tumor necrosis factor alpha [TNF-α], and nitric oxide [NO]). These effects have been seen in different species (feline, canine, equine, human, even cameld cells) and various cells in the joint.¹-⁷ A study using equine chondrocytes demonstrated that the combination inhibited activation of nuclear factor-kappaB, which is an important transcription factor regulating the inflammatory response.⁸

The results (summarized in Figures 1, 2, and 3) provide evidence that NMX1000 ASU, FCHG49 glucosamine, and TRH122 chondroitin sulfate together affect multiple points along the inflammatory pathway throughout the joint tissues.

References

Effectiveness. It might be more expensive, but it is a better value than choosing a product that you are not sure of. If you don’t know for sure what’s in a product, if it is meeting label claims, or if it has been tested, it may not be of much value. It’s all about education and letting clients know.

Dr. Beale: No matter the product, focus on value rather than cost. Look at the quality of the product, how much research has been done to substantiate its

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If your mother’s dog had hip dysplasia, would you use a veterinary nutraceutical product available through licensed veterinarians or a product available strictly over-the-counter?

Dr. Bennett: I would use a veterinary dispensed product, for all the reasons we’ve just discussed. There are no reports of toxicity regarding these products, but studies evaluating the content of some products reveal they did not contain what was stated on the label.6–8

Dr. Beale: The decision to use a certain product isn’t just based on cost. Some manufacturers put little active ingredient in the product but charge a lot for it. We want a manufacturer we can trust that has good quality control and good manufacturing practices. We want something that has science behind it to assure us that it’s safe and efficacious.

Dr. Bennett: In the U.K. the general public are interested in more natural products — herbal products, rather than drugs. And a lot of these are available in health stores. But there’s no control over these, and I don’t think we can assume that they are all safe. There are case reports of animals being fed herbal compounds and having toxicity problems. These products may also react with some of the other drugs that we might prescribe for a patient. So it’s worth asking owners about everything they’ve been giving their animals.

Omega-3 fatty acids

Dr. Beale: The chondrotins and glucosamines have been around for quite a while now. Good research now indicates that ASU may help reduce cytokines. Fish oils are becoming more common. Are long-chain omega-3 fatty acids important in patients with osteoarthritis?

Dr. Cachon: A lot of evidence indicates that omega-3 fatty acids work. For example, dogs with kidney disease have less proteinuria with the use of omega-3 fatty acids.9 Good studies on omega-3 also show improvement of the joint.10,11

Evaluation of Dasuquin® efficacy

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We evaluated the effectiveness of Dasuquin® (a nutritional supplement containing glucosamine, chondroitin sulfate, avocado soybean unsaponifiables, and green tea extract) in dogs with stifle osteoarthritis.

Eight hound-type dogs with induced chronic (> five years) osteoarthritis of a stifle were given either a placebo or Dasuquin for two weeks. After a minimum four-week washout period, the groups were switched. The primary outcome evaluation was the measurement of ground reaction forces (force plate analysis). Clinical parameters were also evaluated, including lameness scores, pain on palpation, comfortable joint range of motion (ROM), and stride length.

In general, dogs receiving Dasuquin had improvements in ground reaction forces (see chart) after two weeks of administration.

Although the differences did not reach statistical significance because of the small study numbers, the consistent improvement with Dasuquin administration and consistent deterioration with placebo suggest that dogs benefited from Dasuquin. In addition, the same dogs had been treated with a variety of nonsteroidal anti-inflammatory drugs (NSAIDs) in a previous study, using the same study protocols. Dasuquin administration resulted in an increase in peak vertical force similar to that obtained with NSAIDs.
Dr. Jerre: If the animal is receiving omega-3 fatty acids in a joint diet, I don’t add it as a supplement. Otherwise, I recommend an omega-3 fatty acid supplement.

Dr. Unger: We’ve changed a lot of animals’ diets to joint diets mainly because the food contains omega-3 fatty acids.

Dr. Beale: Hyaluronic acid (HA) has been used for decades in horses and people with arthritis and synovitis. In the past, we have used hyaluronic acid as an injectable either intra-articularly or intravenously. Now it’s promoted as an oral product as well. Do you use hyaluronic acid?

Dr. Unger: We have used it in a few cases. In end-stage joints, injected intra-articularly. It’s expensive, and you have to use it regularly to obtain the effects.

Dr. Peirone: I have used it intra-articularly in specific cases with joint infection. I used it after the infection has been treated, after the sample of joint fluid is normal.

Dr. Beale: HA is interesting because it’s been around for many years, but there have not been a lot of studies on it in companion animals, and it is difficult to use on a routine basis. Oral HA products are convenient and less expensive, but I have concerns whether this large molecule can be absorbed orally and get to the joint. However, some research supports its ability to be absorbed, especially when delivered with phospholipids.12,13 I occasionally use HA in dogs, cats, and exotic species, such as large hoof-stock and large cats, that have osteoarthritis and joint pain. I often give HA in combination with a long-acting corticosteroid.

Other joint therapies
Dr. Beale: For the past few years, we have used stem cell therapy as an adjunct in dogs, cats, and various exotic species with shoulder, elbow, hip, and stifle osteoarthritis. Recently, we’ve been researching stem cell delivery into arthritic joints after suspending the cells in platelet-rich plasma. We are now collecting data and randomizing cases as part of a clinical study to see if stem cell therapy shows a beneficial effect compared with a placebo. In the present study, we are assessing the outcome in patients with elbow osteoarthritis. Stem cells should not be used in infected joints or in patients with cancer.

Dr. Jerre: I had a case in which a colleague’s dog had arthritis in the knee after cruciate surgery. It recently developed a severe lameness. We were treating it with different preparations and I used interleukin-1 receptor antagonist protein. After a month, the dog was not lame anymore. Even the fluid viscosity was coming back.

Dr. Beale: Methylsulfonylmethane (MSM) has been purported to be mildly anti-inflammatory, maybe scavenging free radicals.

Dr. Bennett: I have not used MSM on its own, but I like the fact that it’s mixed with some of the other products because it’s an antioxidant.

Supplements I recommend have to be proven safe. Research demonstrating that a product is safe is important.

— Dr. Bruno Peirone

Dr. Beale: Have you had experience using injectable chondroprotectants?

Dr. Bennett: I have used injectable chondroprotectants and have found no positive effect with the polysulfated glycosaminoglycans in young dogs with elbow dysplasia and early osteoarthritis. Polysulfated glycosaminoglycans were initially developed as antithrombotic agents. You have to be careful using them together with nonsteroidal anti-inflammatory drugs. Polysulfated glycosaminoglycans have an anticoagulant effect and if a nonsteroidal drug causes bleeding in the gastrointestinal tract, more severe bleeding might occur if the patient had also received a polysulfated glycosaminoglycan.

Dr. Beale: I agree 100% with that. When polysulfated glycosaminoglycan was introduced, we administered it intra-articularly in dogs, based on its success in horses for many years. We later changed to intramuscular and subcutaneous routes in dogs because hemarthrosis occurred in some patients when it was administered intra-articularly. The product is FDA-approved for intramuscular use in dogs. In the United States, it’s used frequently, and I think it’s safe. All the safety
studies have been positive regarding its use in dogs and cats. It may not be one of the first things veterinarians reach for, but it may be used if they are unsuccessful with other modalities.

**Treatment strategies**

Dr. Beale: I try to assimilate all the factors that affect the animal — the disease, the environment, age, species, owner — and tailor a treatment to the individual patient. How do you approach treatment of osteoarthritis for your patients?

Dr. Cachon: A textbook approach to treating osteoarthritis does not work. You have to adapt to the patient and to the osteoarthritis. So you have to tailor treatment to the animals and to the owners. How to counsel the owner effectively is perhaps the most difficult part. And, that conversation is time-consuming. You need to spend a long time explaining to the owner what they need to do, where we want to go, and what we need to do to get the patient better. Of course, it’s easier to say, “Okay, I’ll give you some drugs,” but education is a big part of treating osteoarthritis. You need to take time to explain everything to the owner and to get the owner to comply with the treatment.

Dr. Jerre: We begin by determining the treatment goal. We then initiate nutraceuticals together with a joint health diet. I prescribe NSAIDs and have patients return for a recheck in two to three weeks. For patients that are not doing well, I’ve used autologous conditioned serum. I have also used interleukin-1 receptor antagonist protein in elbows with chronic disease. Many dogs get better and some can discontinue NSAID therapy.

Dr. Peirone: With young dogs, I try to understand and fix the problem perhaps with surgery. After surgery, I prescribe drugs for pain management and use nutraceuticals. In most cases, I prescribe physiotherapy after surgery. It’s different for older patients. Often these dogs are very heavy, so diet and physiotherapy are important. I also try to start nutraceuticals and anti-inflammatory agents together and then stop the anti-inflammatory drug after two or three weeks. I continue the nutraceutical for a long while.

**Omega-3s and joint health**

When using omega-3 fatty acids for joint health management, it is important to consider dosage, stability, and bioavailability. A review article on fish oil in companion animals recommended dosing eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) at a combined 230 mg/kg^{0.75} (metabolic body weight)/day up to the NRC safe upper limit of 370 mg/kg^{0.75}/day in dogs for osteoarthritis. This dosage is two to three times higher than what is recommended for other conditions, such as atopy. So when choosing a product specifically for joint health support, evaluate whether it provides this level of EPA and DHA. It may be easiest to obtain these levels with concentrated liquid fish oil or with a specialty pet food containing high levels of fish oil. Using a concentrated liquid fish oil supplement is a good option as it can be added to any food, especially beneficial if the pet has specific dietary needs. As omega-3 fatty acids are subject to oxidation, it is also important that the product be manufactured and packaged in a way that stability is assured. Lastly, absorption of the particular form of EPA and DHA should have been demonstrated in dogs and cats.

**Reference**

Dr. Bennett: Weight reduction is important if a cat is overweight; however, a lot of older cats are not overweight. Also, NSAIDs and cats may not go well together. Because about 20% of older cats have some degree of renal disease, it is a concern. However, two recent retrospective studies looked at cats receiving an NSAID; one study evaluated renal function and the other evaluated longevity. Based on these study findings, I think if you use an NSAID correctly and taper to a low dose, feed moist food to increase the cat’s fluid intake, and monitor the cat with regular blood tests, an NSAID may relieve the pain and give the cat a much better quality of life.

I always administer a nutraceutical along with NSAIDs in cats and dogs. The nutraceuticals that I use are the three main ones available in the U.K. I’m excited about Dasuquin, though, which we haven’t had in the U.K.; it has ingredients that I like. Dasuquin might become my number one choice because it has features that the others no longer have.

Some veterinarians will not give NSAIDs to cats, but will treat them with nutraceuticals. I believe when you taper the dose of the NSAID, you may be able to discontinue the NSAID and continue to administer the nutraceutical alone. That’s also the approach we use in dogs — taper the dose and discontinue the NSAID, if possible.

Dr. Beale: For which patients do you recommend nutraceuticals?

Dr. Peirone: I use them in young patients when there is a problem, even if I treat the problem surgically. I also recommend nutraceuticals for aged dogs. I always use them in combination with an NSAID. I stop the NSAID in an aged patient after three to four weeks, but continue with the nutraceutical. I don’t use nutraceuticals in healthy dogs.

Dr. Unger: Veterinarians see dysplastic dogs early in their life. We initiate a nutraceutical right away and explain to the owners that even if we perform surgery, the dog will probably require lifetime treatment for degenerative joint disease. We might start with a combination of a nutraceutical and an NSAID or with a nutraceutical alone, depending on how the disease progresses. Otherwise, we recommend a nutraceutical during postoperative care and in any cases where we expect degenerative joint disease or arthritis. I think that is the general management in older dogs.

Dr. Bennett: All the information we have indicates that once osteoarthritis starts it is a slowly progressive disease. Nutramax has done a lot of research showing that nutraceuticals have a positive effect both in the laboratory and for clinical patients. People may take nutraceuticals as a prophylactic or to maintain joint health. In animals, most nutraceuticals are used once disease is already present. I always discuss this with owners.

For example, in the case of an amputation, a cat or a dog will put extra stress on its other joints. It may not have arthritis at the moment, but it could develop with the extra stress of having lost a limb. It’s worth considering a nutraceutical in such cases. Another example is the agility dogs we see in our physiotherapy clinics. We discuss nutraceuticals with the owners, explaining that they could help not only the dogs’ joints but also their soft connective tissues. It would be up to the owner to decide.

Dr. Beale: A lot of field trial and agility dogs that I see in Texas are already being given a nutraceutical, such as Dasuquin. I think those in breeder circles have come to believe that nutraceuticals could help protect their dogs’ joints.

Dr. Cachon: Nutraceuticals and sometimes other treatment modalities need to be given as soon as possible.

Dr. Beale: Some studies in people suggest that less NSAID is needed if patients are taking chondroitin sulfate and glucosamine. Do you see that in your patients?

Dr. Bennett: I’ve certainly seen it, but the evidence is mainly anecdotal. One study of osteoarthritis in dogs showed that an omega-3-rich diet reduced the dose of an NSAID required to manage the disease.
Conclusion

The research and clinical impression are that nutraceuticals can play a key supportive role in multimodal joint therapy for dogs and cats. Perhaps most importantly, veterinarians want to know what is in the products they recommend and that the products they prescribe for their patients are efficacious, safe, and of a consistently high quality.

References


No matter the product, focus on value rather than cost. If you don’t know for sure what’s in a product, if it is meeting label claims, or if it has really been tested, it may not be of much value.

— Dr. Brian Beale